

IECA Australasia Position Statement: **Use of continuous-flow sediment basins and fast-acting** **flocculants and coagulants in the construction and mining** **industries**

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Introduction

IECA Australasia is the peak industry body throughout Australia and New Zealand for erosion and sediment control, with an extensive membership that covers government, mining, agriculture, construction, engineering, energy, utilities, infrastructure and land management.

IECA Australasia members share a passion for the reasonable and practicable prevention of erosion and the by-product of erosion, sediment. IECA Australasia is a not-for-profit industry body that seeks to balance the economic, social and environmental realities of development in a sustainable way.

Background

IECA Australasia has been made aware of concerns within the environmental industry regarding the use of coagulants and flocculants to settle out sediments suspended in water detained on construction and mine sites. These concerns are also limiting the adoption and use of continuous-flow sediment basins (also known as High-Efficiency Sediment Basins, or HES Basins).

The purpose of this statement is to formalise IECA Australasia's position regarding the use of continuous-flow sediment basins and coagulants and flocculants within the construction and mining industries.

Position Statement

IECA Australasia supports and promotes the use of coagulants and flocculants in the construction and mining industries for the purpose of settling out sediments suspended in water detained onsite.

Furthermore, IECA Australasia supports and promotes the use of continuous-flow sediment basins and faster-acting coagulants and flocculants. Continuous-flow sediment basins rely on the use of faster-acting coagulants and flocculants, with their operation able to treat significantly higher volumes of runoff over a range of storm events compared to traditional sediment basins. Continuous-flow sediment basins have been widely used in New Zealand for over 30 years, and in Queensland for over 5 years, with demonstrated performance and improved environmental outcomes.

IECA Australasia does not consider that gypsum (Calcium sulfate) is the only safe option for settling sediment (and other contaminants) out of water. IECA Australasia does not believe that coagulants and flocculants other than gypsum automatically present an unreasonable risk of environmental harm. IECA Australasia supports the ongoing use of gypsum as a safe and reliable option to settle sediment

out of detained water, but does not support restricting the use of other, faster-acting chemicals, or placing overly-onerous testing requirements on proponents prior to using such chemicals.

Overly-conservative and restrictive policies regarding the use of continuous-flow sediment basins and faster-acting coagulants and flocculants risk causing or exacerbating environmental harm because they limit the efficiency of construction-site and mine-site water management. As a result, there is an increased risk of sediment-laden water (and other contaminants) discharging from sites.

Aluminium is the second most common element in soils, and aluminium naturally occurs in all waterways. IECA Australasia acknowledges that environmental harm has sporadically occurred in the past through misuse of Aluminium-based coagulants such as Aluminium sulfate. However, there are safer forms of Aluminium now available, such as PAC (Poly-aluminium chloride) and ACH (Aluminium chloro-hydrate). These safer forms of Aluminium-based coagulants do not impact pH like Aluminium sulfate does and, with appropriate procedures in place, can be safely used on construction and mine sites.

IECA Australasia is pleased that continuous-flow sediment basins and faster-acting coagulants and flocculants are promoted in New Zealand, and in Queensland. IECA Australasia acknowledges that, in 2018, the Queensland Government supported IECA Australasia to update the Best-Practice Erosion and Sediment Control (BPESC) guidelines to promote the use of continuous-flow sediment basins and faster-acting coagulants and flocculants in Queensland. The updated Appendix B (2018) of the BPESC document provides guidance on the design and operation of continuous-flow sediment basins as well as presenting information on the application and risks of a range of coagulants and flocculants which are considered common. These documents are freely available on IECA Australasia's website.

IECA Australasia encourages agencies within jurisdictions outside New Zealand and Queensland to adopt a similarly progressive attitude to the use of continuous-flow sediment basins and faster-acting coagulants and flocculants.

IECA Australasia acknowledges that the use of continuous-flow sediment basins and faster-acting coagulants and flocculants must be accompanied by appropriate procedures to minimise the risk of poor operation or maintenance. However, these procedures are already well-developed and understood as they have been used successfully in New Zealand and Queensland. As such, they should be easily transferable to other jurisdictions.

IECA Australasia would like to see an end to overly-onerous and restrictive Government agency policies that act as a barrier to the adoption of better environmental management practices.



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